

ABSTRACT OF THE DISCLOSURE

Recombinant polynucleotide that contains a plurality of first polynucleotides encoding an antigenic peptide are provided by this invention. The first

- 5 polynucleotides are operatively linked to each other to enhance translation of the polynucleotides to the antigenic peptide and binding of the antigenic peptide to MHC molecules. In a further embodiment, the recombinant contains a plurality of a second polynucleotide encoding multiple copies of antigenic peptides having an amino acid sequence that is different from the peptides encoded by the first polynucleotides.
- 10 The polynucleotides are useful as cancer vaccines or in adoptive immunotherapy. In these embodiments, the polynucleotides encode a antigenic peptide that will induce an immune response to a tumor or cancer. Alternatively, the polypeptides encodes antigens that induce T cell anergy for use in autoimmune disorders. Still further, the antigen is a pathogenic antigen to induce an immune response against a pathogen
- 15 such a virus or bacterial pathogen.

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